Weekly Summary Report
USEPA Oversight, Sauget Area 2, Sauget, IL
WA No. 224-RXBF-05XX / Contract No. 68-W6-0025

Week Ending Friday January 16, 2004

This report summarizes the Remedial Action (RA) work conducted by Solutia and its contractors from January 12, 2003 through January 16, 2004. The current RA fieldwork consists of barrier wall excavating, backfilling, and site preparation.

Contractors Onsite

Inquip Associates Inc. (barrier wall construction contractor)
Pangea Group (construction support services, primary subcontractor to Inquip)
PSI (Professional Service Industries) (geotechnical testing services, subcontractor to Inquip)
URS (primary consultant for Solutia)

Work Performed This Week

Solutia Bankruptcy / Production Halt

Inquip continued to maintain trench stability and to excavate the "notch" between stations 12+40 and 11+40. The notch has not been excavated to total depth, but on both sides the trench is at bedrock.

Groundwater Migration Control System (GMCS)

Pumping rate of each extraction well has increased over the week, in response to a decreasing trend of river levels. The river level decreased from 382.5 feet above mean sea level (amsl) on January 9 to 381.4 feet amsl on January 16, 2004. At the end of the week, the combined pumping rate of the three extraction wells was 1,940 gallons per minute (gpm), with an average pumping rate of approximately 646 gpm per well.

During the week, the river levels were generally up to one foot higher than those measured in piezometers PZ-1S and PZ-3E and up to half a foot lower than those measured in piezometers PZ-2E and PZ-4E.

Table 1 shows the river and piezometer water elevations on January 16 (10:40 AM).

Table 1
River and Piezometer Water Elevations – January 16, 2004 (10:40 AM)

	Elevation (ft above mean sea level)
River Level	381.37
Piezometer 1S (northern-most)	380.31
Piezometer 2E	381.83
Piezometer 3E	381.12
Piezometer 4E (southern-most)	381.92

Site Preparation

Pangea was onsite to check and maintain the silt fences and clay berms around the exclusion zone as necessary. Also, Pangea built an additional section of access road from the existing observation road into the north section of temporary stockpile area.

Stormwater

Stormwater accumulated inside the temporary stockpile area during previous weeks was channeled and pumped to the north modutank. A small portion of the stormwater in the south modutank was conveyed to American Bottom Treatment Plant for further treatment.

Slurry Mixing

No fresh slurry was mixed this week.

Barrier Wall Construction

Inquip has opened the trench to approximately 1,420 feet in length along the barrier wall alignment, from station 24+80 towards station 10+60 (please refer to Solutia's map for locations). Only one clamshell rig was operated. The daylighted backfill (i.e. at ground surface) advanced approximately 20 feet during the week to station 24+80.

Bentonite slurry was pumped into the trench as needed to keep the excavation open. Top and bottom trench slurry samples, together with fresh slurry samples were tested by PSI. The parameters tested on the slurry samples consisted of viscosity, unit weight, filtrate loss, pH, and sand content. The test results generally met the specifications.

Trench depths were measured everyday during the week (AM) with 100 linear feet spacing along the trench and 20-foot spacing of measurements on either side of the backfill toe. The trench depth measurements from the morning of January 16 are shown in Table 2, depicting the weekly progress. Construction progress by January 16, 2004 is shown below. Graph 1 shows the progress of the trench in comparison to the previous week. Graph 2 shows the overall progress of the barrier wall construction.

During the week, Inquip mixed and placed into the trench approximately 895 cubic yards of backfill material. The backfill consisted of spoils with the addition of both clean clay soil at 15 percent and bentonite at 2 percent of backfill volume. Spoils were transferred from central portion of the exclusion zone to the north portion to provide materials for mixing backfill. Backfill was mixed and pushed into the trench using a bulldozer.

The backfill was tested by PSI for slump, unit weight and moisture content. The unit weight of backfill placed during the week measured between 124.5 and 128.5 pounds per cubic foot (pcf). Slump test results were between 3.5 and 4.5 inches. The moisture content ranged from 20% to 21%. All test results met the minimum requirements.

Prior to backfiling, the bottom of trench was cleaned using a clamshell rig. Depth-to-bottom measurements were made every 10 linear feet of trench to ensure the bottom of the trench was at a consistent depth and on top of bedrock. These depth measurements were performed with the clamshell rig's instrumentation and confirmed manually with the downrigger (plumbob on wire). Additionally, two samples of were collected by URS and PSI with a clam sampler from the top of the placed backfill in the trench. These backfill samples were visually checked to ensure that the backfill surface was clean and free of any sand prior to placing additional backfill.

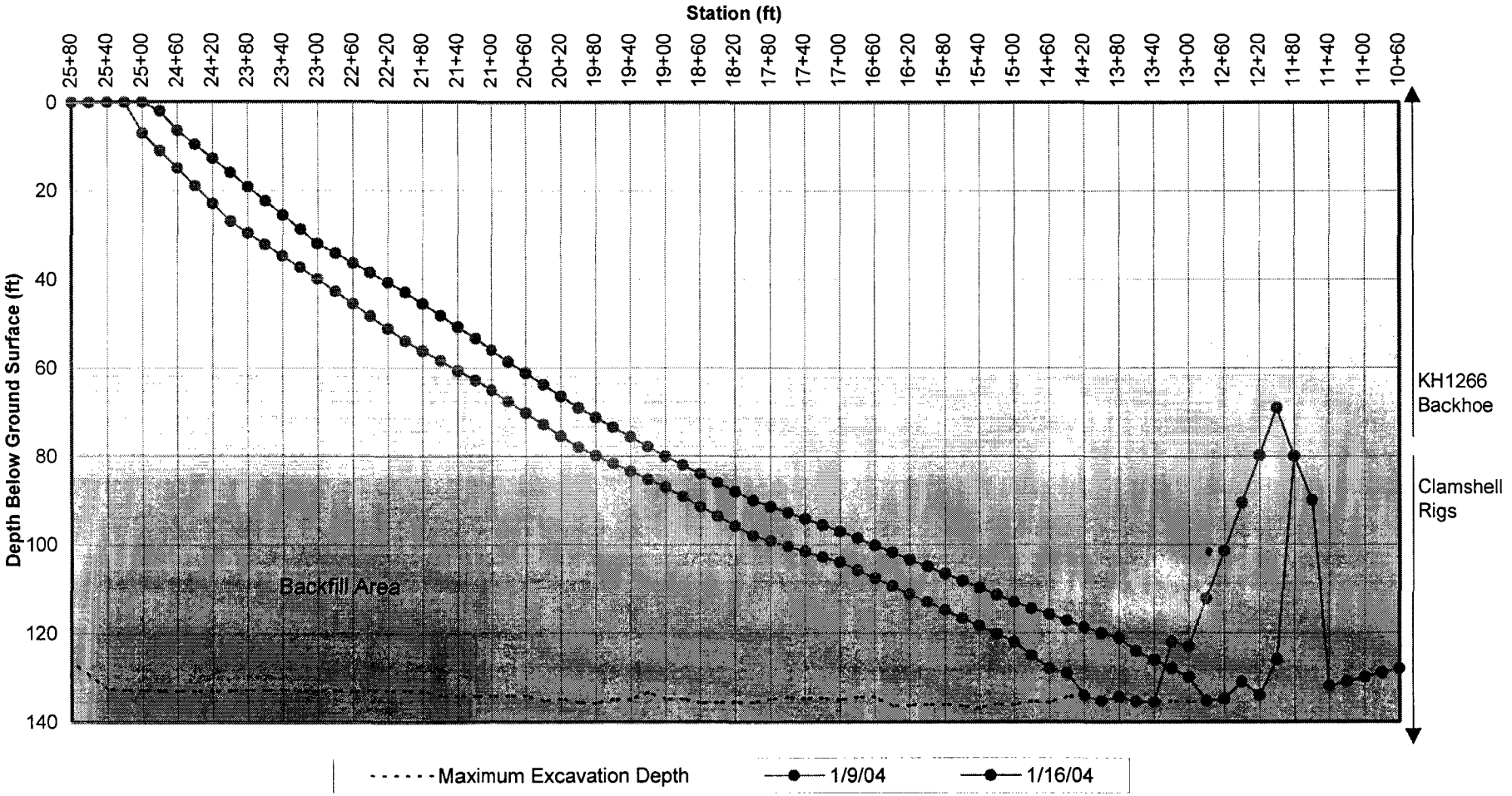
Table 2
Trench Profile (Downrigger Measurements) for the Barrier Wall Trench – January 16, 2004 (AM)

Station ID	Depth to bottom (ft below ground surface)
10+60	108
11+00	106
12+00	126
12+20	134
12+40	131
12+60	129
12+80	128
13+00	130
13+20	128
13+40	126
13+60	124
13+80	121
14+00	120
15+00	113
16+00	105
17+00	97
18+00	90
19+00	80
20+00	69
21+00	56
22+00	43
23+00	32
24+00	16
24+80	2

Note: Distances between stations where trench depth measurements were read varies in Table 2. Measurements are separated by 100 linear feet of trench in most areas, however, the area that delineates the toe of the backfill is measured every 20 feet.

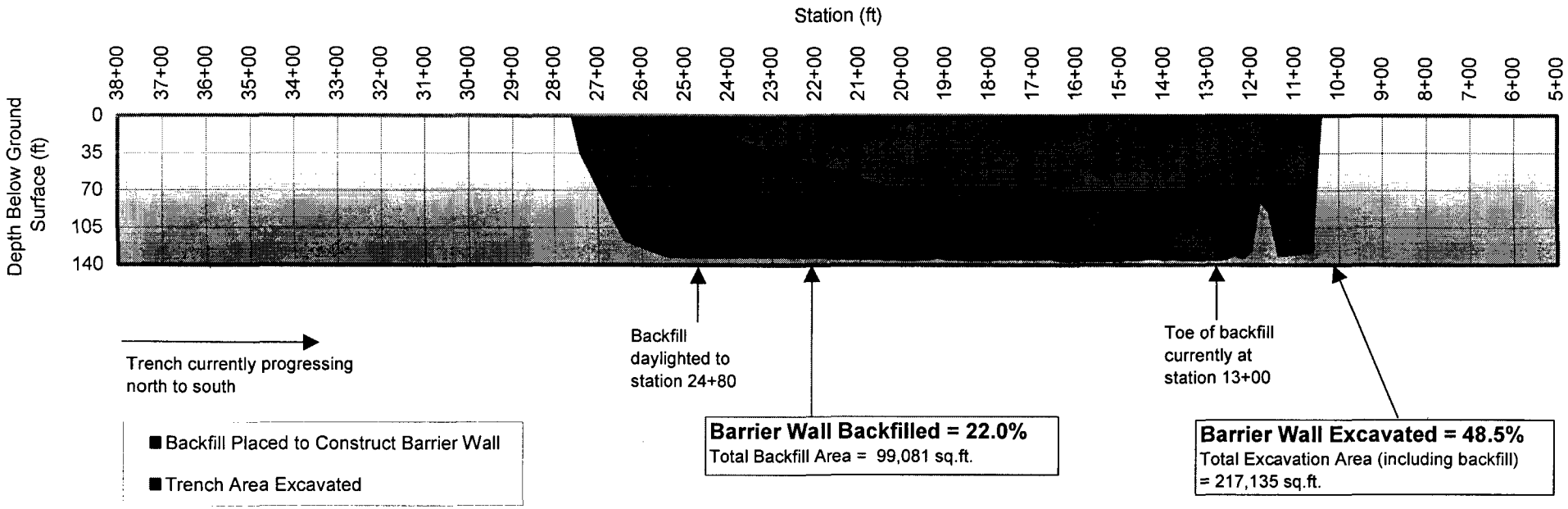
Construction Progress

Graph 1 - Weekly Barrier Wall Construction Progress
Jan. 12th to Jan. 16th 2004



Note: Data plotted for week through AM measurements on 1-16-04.
Some data points are interpolated between the available data points where trench depth measurements were read.

Graph 2 - Barrier Wall Construction Progress by January 16, 2004



Note: Data plotted for week through AM measurements on 1-16-03.
Backfill and Excavation Areas and Percentages are calculated daily by URS based on excavation logs from cranes